

# Operational Planning in Civil Defense for Environmental Health

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**T**ECHNICAL preparations for the eventualities of a disaster are of little value without an operational plan describing the course of action to be taken in a given contingency. The operational plan says in specific terms who does what, when, and how. It is the mainspring of civil defense work.

There have been many activities in civil defense planning over the past two decades. One, the mutual aid program for waterworks, begun during World War II, is still carried on in many areas and serves a useful purpose. Following the 1955 floods in Pennsylvania, this program was the principal means for the emergency restoration of many damaged or destroyed waterworks.

Volumes have been written about the technical aspects of civil defense and natural disaster problems. These have been issued by the Federal Civil Defense Administration (since July 1, 1958, combined with the Office of Defense Mobilization to form the Office of Civil and Defense Mobilization), the Public Health Service, State and local departments of health, the Armed Forces, professional and technical associations and societies, the American National Red Cross, and the National Research Council Committee on Disaster Studies. The suggested reading list for civil defense health services includes only a small part of the avail-

able literature, yet the titles cover four typewritten single-spaced pages. There is no dearth of technical information for those desiring it.

A considerable amount of training has been undertaken by the Federal Civil Defense Administration through its Staff College and Radiological Defense School, by the Department of Agriculture, by the Department of Defense, by the Public Health Service, and by the Food and Drug Administration, although some of the PHS courses and the FDA courses were suspended on July 1, 1957. The radiological health training course, conducted for years by the Public Health Service at the Robert A. Taft Sanitary Engineering Center in Cincinnati, is continuing.

The result is a considerable reservoir throughout official health organizations of technically informed professional personnel whose services would be invaluable in disasters. However, plans to use their competencies effectively were inadequate or nonexistent. The big void was in the development of operational plans tailored to current planning assumptions which are based on enemy capabilities. These assumptions are set forth in detail in FCDA Advisory Bulletin No. 204.

The major threat is attack by thermonuclear weapons in the megaton range. There is no defense against this weapon except distance and shielding. If we had shielding or blast shelter, our plans would utilize them. But in their absence, the only protection is not to be near the weapon when it detonates. Hence, the Federal Civil Defense Administration recommended the broad policy of evacuation as the best means of saving a substantial portion

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of the people. Application of this policy must depend upon local circumstances. The determination of whether to evacuate or not is the responsibility of the States and communities.

The threat of biological and chemical warfare agents is not being overlooked. A growing school of thought holds that, as the thermo-nuclear capabilities of the prime adversaries reach a stalemate, biological and chemical warfare agents are likely to take on increasing importance.

### **The Gap in Civil Defense**

In observing the civil defense preparations being made throughout the country, it was noted that the most important phase, operational planning, was being neglected, largely because of the States' inability to finance the development of operational plans. All technical preparation is of little or no value without an operational plan which assigns functions and areas of responsibilities to the people in governmental positions. They must know the who, what, where, when, and how of their community's civil defense plans. They must know who is the boss, who takes the boss' place when he isn't there, and who replaces the substitute boss when he is not there. They must know what equipment and supplies are available and where they are to be found. They must know how to obtain transportation and how and with whom to communicate.

As the history of disasters reveals, chaos is almost inevitable when there is no operational plan to control and direct the forces attempting to give aid. The account in FCDA Technical Report 11-2 of the Arundel Park fire in Baltimore contains a typical incident. A physician residing in the neighborhood took his bag and went to the fire to help. He reported seeing confusion and elements of panic. He gave first aid, administered drugs he had with him, marked each patient with the medication and the time it was given, directed ambulances not to converge on the nearest hospital, and advised about 100 of the injured to see their own doctors. He soon ran out of supplies.

The only other sources he knew of were the first aid kits of fire wagons and ambulances. Too late he discovered that supplies were avail-

able from local druggists, and that a health center and casualty clearing station where stretchers, dressings, and antibiotics were stored was only a few blocks away.

A county health officer received no notification of the fire until he heard of it on the radio at his home in Annapolis. He rushed to the site but arrived after all casualties had been evacuated. Although he was chief of the organization planned to handle disasters, he was powerless to make the organization effective because physicians were not aware of the disaster plan.

Realizing the importance of operational plans and their lack in most areas, the FCDA launched a survival planning program some 2 years ago. This program is entirely financed by Federal funds through contracts with the States. The States hire the personnel and do the work under the terms of the contract. Some 47 States and Territories are now engaged in this activity.

### **The Plan's Function**

The operational plan is the joint product of the area's chief executive, such as the governor or the mayor, and his staff. However, once the chief executive has approved and adopted the plan, it becomes his personal standing order and he takes complete responsibility for it. Prior to putting it into operation, the plan is subject to continual review, revision, refinement, and amendment, and all improvements in organization, training, and equipment are a part of the plan.

Destruction of communications and facilities by enemy attack will make it impossible for the chief executive to influence the actions of emergency forces for periods ranging from a few minutes to several hours or days. Therefore, control during this period may be decentralized, down to single service units of a few persons. Not until communications have been restored can the chief executive again influence action.

At this point of decentralization the operational plan is vitally necessary. As the standing order of the chief executive, it substitutes for his personal instructions until his control has been reestablished. Under these circum-

stances the success or failure of the operational plan becomes the success or failure of civil defense as a whole.

As control is reestablished, the flow of information and intelligence resumes, enabling the chief executive to operate in accordance with the situation. His future actions and orders are customarily expressed with reference to the operational plan, and often as modifications of it.

The entire process of meeting massive damage throughout an area depends on the soundness of the operational plan. The people's will and ability to resist, to save lives and property, to restore a community to a state approaching normal living, and ultimately to safeguard the productive capacity of the Nation, all are rooted in the practicability of the operational plan and the proficiency of its working organization.

Most of the work already done in the States under the survival planning program has been confined to the development of an organization and an operational plan at the State level and State-district level. This is essential to provide a frame of reference for lower echelons as they prepare their own plans. Without it, two or more cities may expect to use the same facilities in their civil defense plans.

To date these plans are generally sketchy, and to make them truly operational will require considerable study and revision by the people charged with the responsibility for carrying them out. It is imperative that the people assigned places in the organization be fully aware of their positions and their duties and responsibilities. They must also know to whom they are responsible, where they report, what they have to work with, and other details. These same people must be consulted in the planning so that the ultimate blueprint for action is tailored to their capabilities.

The general method of approach in most States is to assign to a staff member or members the responsibility of developing the operational plan. This is an appropriate procedure, and experience has demonstrated that an initial draft of the plan will be ready in the shortest possible time. However, unless the staff then studies the plan thoroughly, making appropriate revisions and additions, and becomes thoroughly familiar with it, the plan is worthless.

Health departments throughout the country too often are not aware of this planning and take little or no interest in it. They seem to feel that their civil defense readiness is complete if someone is assigned to prepare a plan.

Actually, at this point the essence of planning begins. For at this stage the people who are responsible at the grassroots begin to act.

Furthermore, in the event of an enemy attack, health authorities can never hope to provide much more than the nerve center of the total organization needed. But around this center the various kinds of auxiliary personnel must be assembled to accomplish the tasks of restoration.

### **Sanitation and Civil Defense**

In all of the plans of the various States engaged in civil defense planning that I have seen, sanitary engineering and sanitation are always considered. In many instances, it is the only public health program mentioned. Why, I do not know. I like to think it is because the public recognizes sanitation as the foundation of public health work. Perhaps a lack of professional guidance has resulted in the omission of some important public health programs. Or possibly, after a study of the situation the realistic conclusion drawn, based on the limits of capabilities, is that all efforts must be concentrated on sanitation to provide maximum return for effort expended.

What are the specific responsibilities of the sanitary engineer and the sanitarian? Certainly they encompass all of the customary ones, complicated by the possible use of chemical warfare contaminants, biological warfare contaminants, and radioactivity. At the minimum, the sanitary engineer must be prepared to protect water, milk, and food supplies from all normal contaminants and those introduced overtly or covertly by the enemy.

The technical aspects of this task should not be completely overwhelming. It is clear that sanitarians and sanitary engineers must equip themselves to handle the problems associated with radioactivity in this age when the atomic energy industry is rapidly mushrooming. This capability must be developed as one more public health concern.

The same attitude can be applied to chemical warfare agents. The nerve gases are second cousins to the newer insecticides being used so widely in insect control and agriculture. Sanitarians must know how they are being utilized. We have been familiar with the biological warfare agents for years. However, the disease manifestations from various modes of dissemination may become extremely perplexing and cause much damage before they are ultimately brought under control.

How can we assume these added responsibilities when our overburdened staffs cannot discharge all the duties now placed upon them? This dilemma has always been with us. The only answer is that we must find ways of accepting these responsibilities because if we do not, someone else will assume them. And that would fractionate still further the health activities which are already too fractionated. If we provide the leadership and the coordination for those who do express an interest in these matters, we can retain in official health agencies those activities which rightly belong to them.

In attempting to envision the conditions of modern war, it is important that we think of a program based on facilities prevailing a half century ago. Initially, fallout may prevent movement in many areas. Communications will be disrupted and electric power unavailable, with a consequent lack of heat, light, refrigeration, sewage disposal, and water supply.

We must prepare to exist on our local resources, possibly for weeks. OCDM recommends that each family prepare to remain within its own home for no less than 14 days. Any immediate aid following an attack must be local in origin. No State should plan for or expect to receive any assistance from outside sources or from the Federal Government for at least 30 days following an attack. However, Federal aid will be forthcoming as soon as it is humanly possible in the circumstances.

In making operational plans for emergency action today, we must never forget the possibility that this threat will be with us for a long time. In designing, constructing, and re-

constructing sanitary facilities, we should think of reducing their vulnerability to blast effects, and of their functioning during power interruptions. Although we recognize our dependence on central sources of water and power and on central systems of sewage collection and disposal, we must consider the advisability of building into these systems the maximum degree of self-sufficiency at the lowest possible level of operations.

### **Achieving Readiness**

Four principal survival measures are necessary to achieve a state of readiness. They are:

- The establishment of emergency lines of succession for key personnel in the organization.
- The preservation of records essential to continued functioning and emergency actions.
- The establishment of emergency locations for operations.
- The full utilization of all personnel, facilities, equipment, and supplies for emergency operations.

The first three measures are relatively simple to accomplish, but they are absolutely essential and must be part of any planning. The fourth is far more difficult.

How many civil defense organizations know what personnel, facilities, equipment, and supplies are available for emergency sanitation operations? How many have made a study of what would be needed to accomplish such a task in the kind of disaster we may encounter? After such studies, what balance was struck between what is available and what might be needed? What are the deficiencies and what action is being taken to overcome them?

These are some of the environmental health aspects of civil defense. Basic to them, and to all other civil defense activities, is operational planning. This planning must be done by those who will be responsible for putting it into action. The plan is merely a record of what has been undertaken and completed by official health agencies. The plan itself is nothing, but planning is everything.